means of pilot balloons and occasionally by means of double nephoscope and double theodolite observations. A systematic study will be conducted by means of multiple nephoscope observations to determine the influence of the mountain on the height of medium and perhaps high clouds.

Aerologic observations.—Whenever conditions permit, hydrogen-inflated pilot balloons with 180 meters per minute ascensional rate are released and followed with a theodolite (fig. 4). A complication is being introduced in the computation of the ascensions where the initial elevation angle is negative due to downdraft effect. When enough double theodolite ascensions shall have been made, it will be possible to work out a scheme for calculating with a fair degree of accuracy the position of the balloon during the downward run.

So far more than 200 pilot balloon ascensions have been made. In one instance a balloon released 100 yards below the windward side of the summit followed nearly the same downward course of a balloon released from the summit.

Solar radiation.—Total solar and sky radiation on a horizontal surface is being recorded by means of an Eppley-type pyrheliometer bulb (fig. 5, right, top) connected to an Engelhard recorder. One of these bulbs was continuously exposed to the full severity of the elements last winter (1932–33), and was undamaged until overloaded by lightning last spring. Direct solar observations are made on clear days by means of a thermopile. All the solar apparatus was loaned and installed by the Eppley Laboratory, Inc., of Newport, R.I.

Aurora borealis.—The frequency and various developments of auroral displays are accurately recorded on star charts supplemented by theodolite measurements.

Optical phenomena.—Optical phenomena are accurately recorded in time and dimensions. Particular emphasis is given to coronae and halo measurements. Unusual visibility and time and character of sunrises and sunsets are also recorded.

Snow temperature.—Various tests of snow temperature at various depths have been made and correlated with variations in the air temperature.

Snow and rime sediments.—Samples of snow and rime sediments were taken and sent to the Massachusetts Institute of Technology for analysis.

Some meteorological data on Mount Washington and comparison stations for 1933

	Monthly mean temperature in degrees F.			Monthly precipitation in inches		
	Mount Washington	Pinkham	Concord, N.H.	Mount Washington	Pinkham	Concord, N.H.
January	12.6	24.2	30.8	4.59	3.03	1.95
February	7.0	20.8	27.6	5.58	3.75	3.27
March	9.2	22.7	31.1	6.90	7.80	5.23
April	25.4	36.9	43.0	9.45	8.07	6.36
May	37.0	50.7	57.8	3.66	3.33	2.44
June	46.1	59.2	66.9	5.36	2.87	1.25
July	49.6	60.6	69.1	4.63	6.36	3.25
August	49.7	59.3	67.4	10.13	7.76	6.01
September	42.2	54.2	60.9	5.04	2.74	4.54
October	29.7	42.0	48.4	4.64	6.77	4.90
November	12.2	26.4	33.1	5.69	1.89	1.50
December	5.0	14.6	20.0	4.11	4.97	2.76

	Average hourly wind movement in miles per hour		
	Mount Washington	Blue Hill	Portland
May	35.8	16.9	9.3
June	32.1	12.8	8.7
July	26.4	12.9	7.4
August	24.8	13.0	7.6
September	34.2	10.8	7.5
October	41.0	14.1	9.3
November	52.0	17.0	9.3
December	59.0	19.2	9.2

Maximum pressure, 24.20 inches (S.L. 30.75 inches) Oct. 21.
Minimum pressure, 22.51 inches (S.L. 28.74 inches) Mar. 9.
Maximum temperature, 71.0° F. June 28.
Minimum temperature −46.2° F. Dec. 29.
Maximum wind velocity, 164, miles per hour, recorded on Apr. 5.

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C. FITZHUGH TALMAN, in charge of Library

RECENT ADDITIONS

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